

WHAT IS CLAIMED IS:

1. A fax service system in a home network comprising:

a middleware server for collecting a device information and a control information from at least one information device connected to the home network, and providing the device information and the control information upon a request;

a storage means for storing a fax data;

a fax machine connected to the home network through a power switch and a telephone line; and

a fax data processing unit receiving the fax data through the Internet Protocol destined for the fax machine which is connected to the home network through the power switch and the telephone line, and storing the fax data in the storage means, wherein

the fax data processing unit transmits a control command to the power switch through the middleware server to change the fax machine into an on state when the fax machine is detected as being in an off state according to an information of the fax machine from the middleware server, and then transmits the fax data to the fax machine through the telephone line.

2. The fax service system in the home network of claim 1, wherein the fax data processing unit requests the middleware server to display a message informing a receipt of the fax data on a display connected to the home network, when the fax data is received from an external network.

3. The fax service system in the home network of claim 1, wherein the fax data processing unit transmits a control command to the power switch through the middleware server to change the fax machine into the off state when the fax data is completely transmitted to the fax machine.

4. The fax service system in the home network of claim 3, wherein the power switch is a power line communication module in the fax machine.

5. The fax service system in the home network of claim 1, wherein the power switch is an adaptor which connects a power plug of the fax machine with a jack for controlling a supply of power to the fax machine to change a fax machine state comprising the on state and the off state, according to the control command.

6. A method of a fax service in a home network comprising the steps of:

providing a respective identifier (ID) to each of information devices connected to the home network and collecting a respective device information and a respective control information from each of the information devices as collected information;

receiving a fax data through the Internet Protocol destined for a fax machine connected to the home network through a power switch and a telephone line, and storing the fax data in a storage means;

transmitting a control command to the power switch of the fax machine through a middleware server to change the fax machine into an on state when an off state of the fax machine is detected from the collected information; and

transmitting the fax data to the fax machine through the telephone line when the fax machine is changed into the on state.

7. The method of the fax service in the home network of claim 6, further comprising the step of displaying a message informing a receipt of the fax data on a display which is connected to the home network, when the fax data is received from an external network.

8. The method of the fax service in the home network of claim 7, further comprising the step of transmitting a control command to the power switch through the middleware server to change the fax machine into the off state.

9. The method of the fax service in the home network of claim 8, wherein the power switch is a power line communication module in the fax machine.

10. The method of the fax service in the home network of claim 8, wherein the power switch is an adaptor which connects a power plug of the fax machine with a jack for controlling a supply of power to the fax machine to change a fax machine state comprising the on state and the off state, according to the control command.

11. A fax service processing apparatus in a home network, comprising:

a first interface operating in order that information devices which are

connected to an external network and the home network are connectively operated with each other, collecting a respective device information and a respective control information from at least one information device, and then exchanging a fax data through the Internet Protocol with a home gateway which has a middleware server for providing the respective device information and the respective control information upon request;

a second interface connected with a fax machine through a power switch and a telephone line to exchange the fax data;

a storage means for storing the fax data received through the first interface; and

a control unit for receiving the fax data through the first interface, storing the fax data in the storage means, transmitting a control command to the power switch through the middleware server to change the fax machine into an on state when the fax machine is detected as being in an off state according to an information of the fax machine from the middleware server, and outputting the fax data to the fax machine through the second interface.

12. The fax service processing apparatus of claim 11, wherein the control unit requests the middleware server to display a message informing a receipt of the fax data on a display which is connected to the home network, when the fax data is received from the external network.

13. The fax service processing apparatus of claim 12, wherein the control unit transmits a control command to the power switch through the middleware server to switch the fax machine into the off state.

14. The fax service processing apparatus of claim 13, wherein the power switch is a power line communication module in the fax machine.

15. The fax service processing apparatus of claim 13, wherein the power switch is an adaptor which connects a power plug of the fax machine with a jack for supplying power to the fax machine, and switches the power supply according to the control command.

16. The fax service system in the home network of claim 1, wherein the fax data processing unit receives the fax data from an external network.

17. The method of fax service in the home network of claim 6, wherein the fax data is received from an external network.